I wish to thank J. A. Powell and R. I. Usinger, University of California, and G. W. Byers, University of Kansas, for the loan of specimens contributing to the description of this new species.

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A New Species of *Allochthonius* from the Pacific Northwest of North America

(Arachnida : Chelonethida)

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A widespread and rarely collected species of pseudoscorpion, belonging in the tribe Pseudotyrannochthoniini Beier, occurs in California, Idaho, and Oregon. This species is placed in the genus *Allochthonius* Chamberlin (1929), although a few comments seem necessary to justify such a placement.

In 1929 Chamberlin described *Allochthonius*, with *Chthonius opticus* Ellingsen as the orthotype, in the tribe *Chthoniini.* Chamberlin (1962) reassigned *Allochthonius* to the tribe Pseudotyrannochthoniini without indicating its relationship to the other genera. In Hoff's (1951) key to the tribe Pseudotyrannochthoniini, *Allochthonius* stops at couplet 3. Since the coxal spines are not simple, *Allochthonius* appears to differ from *Centrochthonius* Beier; and as the spines are not inserted individually, progress in the key is halted. The simple apices of the coxal spines attributed to *Centrochthonius* are atypical of the tribe and, if the observation is correct, that genus is truly distinctive. Interpretation of the nature of the coxal spines (with or without a common base) is more subjective, and this interpretation bears on whether the North American species should be placed in *Allochthonius* or in *Tubbichthonius* Hoff.

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Figs. 1–5. *Allochthonius incognitus* Schuster, new species. 1, chela; 2, carapace; 3, male genital area (setae of anterior and posterior opercula omitted from right side) ; 4, coxal spines of pedal coxa I; 5, intercoxal tubercle.

Figs. 6–8. *Allochthonius shintoisticus* Chamberlin, holotype female. 6, chela; 7, coxal spines; 8, intercoxal tubercle.

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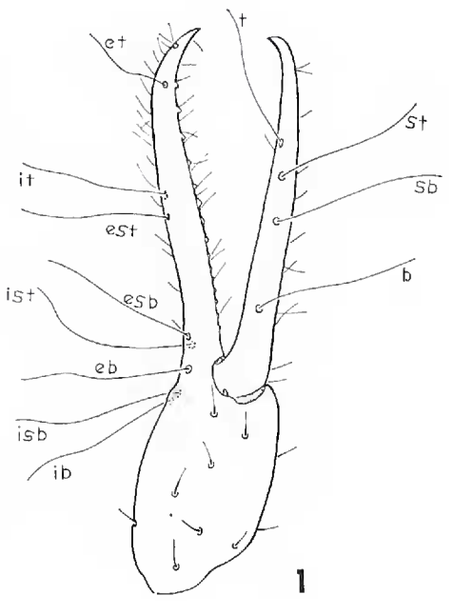

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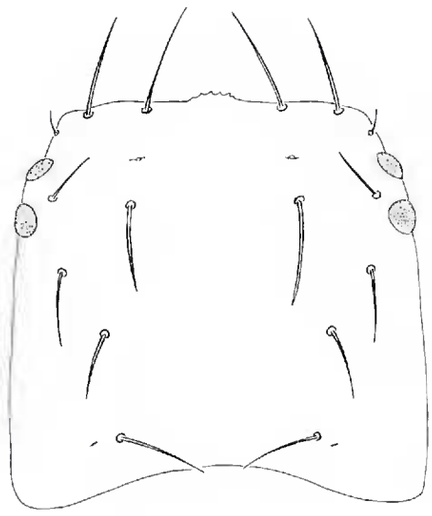

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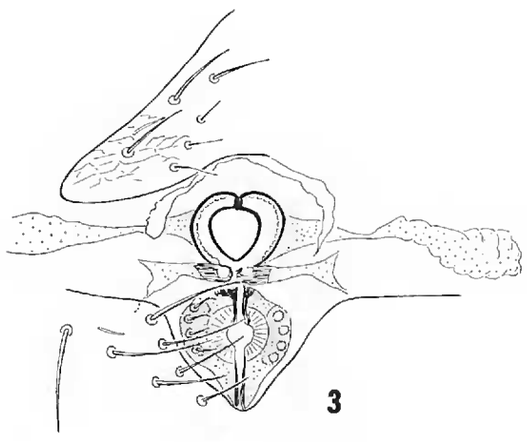

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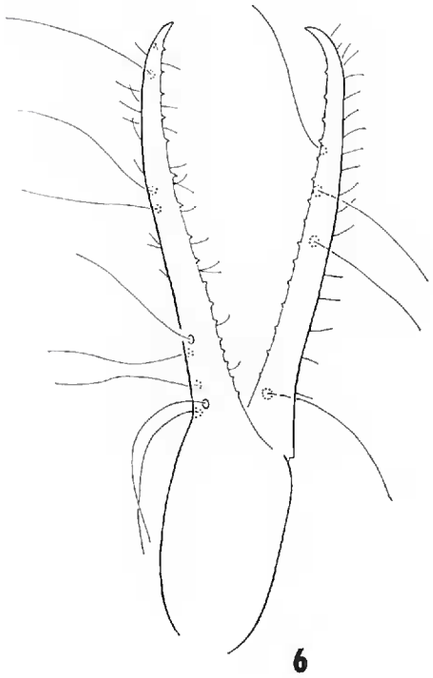

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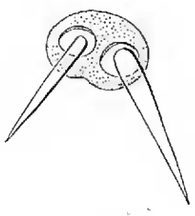

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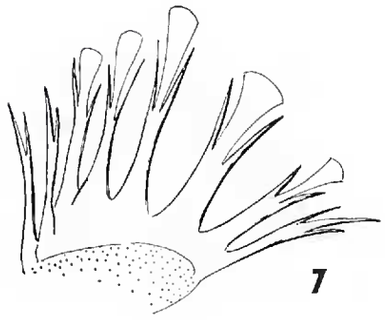

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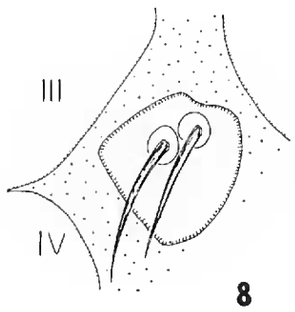

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The coxal spines arise more or less as a group in the described species of *Allochthonius*, and arise independently in *Tubbichthonius*. However, the coxal spines of a Chilean species that is congeneric with our North American species are intermediate in this character. On some specimens the coxal spines arise from the edge of a membranous area of the coxa and could be interpreted as having a common base. When oriented somewhat differently, the coxae of other specimens appeared to be uniformly sclerotized with the spines arising individually. Because a gradation is demonstrated (*Allochthonius* with the membranous area tumid (Fig. 7); the Chilean specimens where the membranous area may or may not be visible; and *Tubbichthonius* with the coxal spines arising individually), the character is of doubtful value for distinguishing genera, and the North American species is placed in *Allochthonius*.

Allochthonius incognitus Schuster, new species

MALE.—Total length excluding chelicerae 1.40 mm; body generally reticulate. Carapace 420 μ long medially, 420 μ wide; epistome slightly and evenly rounded; with two pairs of eyes; 16 pairs of setae arranged 6:2:16 (Fig. 2). Chelicerae 335 μ long, 170 μ wide; fixed finger with one large tooth and seven to eight small teeth between it and base; movable finger with four small teeth and up to four additional minute teeth. Tergal chaetotaxy 2:4:4:4:6:6:6:7:5:4:2, with median setae longer than lateral setae in even-numbered rows, shorter in odd-numbered rows, and both increasing in length from anterior to posterior regions of abdomen. Sternites VI–VII with 12 marginal setae. Pedal coxa I with coxal spines (Fig. 4). Intercoxal tubercle bears two setae (Fig. 5). Anterior operculum of genital structure (Fig. 3) with three pairs longer setae laterally, two to three pairs shorter setae medially; posterior operculum bears four to five guard setae laterally on each side; posterior margin with six setae total. Dimensions of palpal segments: trochanter 200 μ long; femur 660 μ long, 120 μ wide, widest distally; tibia 270 μ long, 120 μ wide; chela (Fig. 1) 925 μ long (width unknown), 195 μ deep, fixed finger with 20 widely spaced teeth, smaller and closer in basal third; movable finger 570 μ long, without teeth; some setae of hand slightly thicker than normal setae of fingers.

FEMALE.—Unknown.

Holotype male from LOON LAKE, DOUGLAS COUNTY, OREGON, 30 June 1959, L. M. Smith; one paratype male 1.1 mile east of Scottsburg, Douglas County, 2 July 1959, L. M. Smith; two paratype tritonymphs 18 miles south of Klamath (Del Norte County) in Humboldt County, 13 August 1953, G. A. Marsh and Robert O. Schuster; one paratype tritonymph Jct. Nicolas Creek and Coeur d'Alene River, Shoshone County, Idaho, 29 July 1959, F. C. Raney; deposited in the Department of Entomology, University of California, Davis.

While there are differences between this species and *A. shintoisticus*

Chamberlin from Japan, the preponderance of similarities indicates that they are probably congeneric. The type of *A. shintoisticus* is a female, so no comparison can be made of the secondary sexual characters.

Allochthonius incognitus is readily distinguished from *A. shintoisticus* by the chaetotaxy of the carapace, which is 8:4:24 in the latter. The chela, coxal spines, and intercoxal tubercle of *A. shintoisticus* (Figs. 6, 7, 8) have been illustrated to provide a comparison between the two species.

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Notes on *Arcynopteryx* (*Oroperla*) *barbara* (Needham)

(Plecoptera)

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More than 30 years ago the late James G. Needham described the nymph of this moderately large Californian stonefly with peculiar lateral abdominal gills (Needham, 1933). Despite efforts by several aquatic biologists to find the adult, none was found until I collected an adult male in 1964 from a bridge over the upper Truckee River. In 1965 two additional males were taken from a bridge over the upper reaches of the Yuba River. Below is a description of the male, designation of a holotype, and a few observations of captive nymphs made by Stephen W. Hitchcock, who has permitted me to present them. The drawings of head and pronotum and male genitalia were made by Alan V. Nebeker. Financial assistance for a part of the research upon which this paper is based was furnished by the National Science Foundation through grant GB-3726.

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